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Preliminary Assessment Review
Summary Report

SITE NAME AND ADDRESS: Piti Power Plant Transformer Storage Area
Piti, Guam 96630

EPA ID NO.: GU4170090001 (2823)

FOR EPA USE ONLY

- **EPA FURTHER ACTION DETERMINATION:** PA complete 10/9/92 cjd
  N
  Fed Fac
- **SI LEAD:** LWay 10/13/92
- **SIGN OFF DATE:** _____
- **INITIALS OF WORK ASSIGNMENT MANAGER:** C. Douglas

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PITI POWER PLANT TRANSFORMER STORAGE AREA
PITI, GUAM

FEDERAL FACILITY
PRELIMINARY ASSESSMENT REVIEW

SUMMARY REPORT

Prepared For

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
San Francisco, CA 94105

Work Assignment No.	:	C09055
EPA Region	:	9
Date Prepared	:	July 18, 1992
Contract No.	:	68-C9-0009
PRC No.	:	012-C09055702
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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

FEDERAL FACILITY PRELIMINARY ASSESSMENT REVIEW SUMMARY REPORT

DATE: July 15, 1992

SUBMITTED TO: Carolyn Douglas, Federal Facilities Coordinator
U.S. Environmental Protection Agency, Region 9

PREPARED BY: Warren S. Hall, PRC Environmental Management, Inc.
Honolulu, Hawaii

THROUGH: Ksenija Mikulicic, PRC Project Manager

FACILITY: Piti Power Plant Transformer Storage Area
Piti, Guam 96630

EPA ID NO.: GU4170090001

EPA CONTRACT: 68-C9-0009

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA), Region 9, under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986 (SARA), has tasked PRC Environmental Management, Inc. (PRC) to conduct a preliminary assessment (PA) review report of the Piti Power Plant Transformer Storage Area located on the grounds of the Piti Power Plant complex at Apra Harbor in Piti, Guam.

The Piti Power Plant Transformer Storage Area (TSA) site was first brought to EPA's attention on July 13, 1981, when a Notification of Hazardous Waste Site (EPA Form 8900-1) was submitted by the Commanding Officer of the U.S. Navy Public Works Center, Guam (PWC Guam) (Reference 1). EPA ID No. GU4170090001 was assigned to the entire Piti Power Plant complex. The Piti Power Plant TSA was entered into the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database on December 28, 1987.

The purpose of a PA review report is to review existing information on the site and its environs to assess the threat(s), if any, posed to public health, welfare, or the environment and to determine if further investigation under CERCLA/SARA is warranted. After reviewing this PA review report EPA will decide if further investigation of the Piti Power Plant is necessary to more completely evaluate the site using EPA's Hazard Ranking System (HRS) criteria. The HRS assesses the relative threat associated with the actual or potential releases of hazardous substances from the site. The HRS is the primary method of determining a site's eligibility for placement on EPA's National Priorities List (NPL). The NPL identifies sites at which EPA may conduct remedial response actions. This PA review report is the result of PRC's evaluation of the submitted data.

1.1 APPARENT PROBLEM

The Piti Power Plant TSA is property that is currently part of the Piti Power Plant complex which is owned by the U. S. Navy (Navy) and operated by PWC Guam. According to EPA Form 8900-1 submitted on July 13, 1981, transformers, capacitors, and storage drums containing polychlorinated biphenyls (PCBs) have been stored and maintained at the site since before the Piti Power Plant was constructed in 1964 (Reference 1). The Piti Power Plant TSA showed evidence of a PCB release in 1981 and in 1985 the site was cleaned up to a PCB level of less than 2 parts per million (ppm) by PWC Guam under the supervision of the EPA (Reference 2). Documentation of the PCB removal could not be obtained and the effectiveness of the cleanup operation could not be determined. The site is no longer used for storage of PCBs or PCB articles (Reference 2).

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The Piti Power Plant TSA is located at 13°27'44.0"N latitude and 144°41'25.0"E longitude at an elevation of approximately 10 feet above mean sea level (References 1, 3). The site is on the northeastern shoreline of Apra Harbor at the point where Cabras Island, which forms the northern border between Apra Harbor and the Philippine Sea, joins the main island of Guam. The site is approximately 300 feet south of the Piti Power Plant, an electrical power generating facility operated

by PWC Guam. To the west of, and adjacent to, the Piti Power Plant is another electrical power generating plant operated by the Guam Power Authority.

Apra Harbor, the primary commercial harbor and the site of most of the Navy operations on Guam, lies 800 feet west of the Piti Power Plant TSA. Piti School lies across Marine Drive about 1,200 feet southeast of the site. The locations of the Piti Power Plant TSA and the Piti Power Plant are shown in Figures 1 and 2.

2.2 SITE DESCRIPTION

The Piti Power Plant TSA is a concrete pad of undetermined size that was used for the storage of unused PCB transformers, capacitors, and drums of PCBs or other PCB items. The site is not covered by any roofing or structure and is a cement pad used for equipment storage. The site is part of the Piti Power Plant complex (Reference 2, 4).

EPA Form 8900-1 states that the site is 200 feet from the nearest surface water body and is not within the 100-year floodplain. The Apra Harbor, Guam topographic map, used as a reference in this review, does not indicate any surface-water features within 200 feet of the site. According to this map, the nearest surface-water feature to the site is Apra Harbor, which lies 800 feet to the northwest (Reference 3).

Topography of the site and surrounding areas is relatively flat. Much of the entire northeastern portion of the Apra Harbor area is of similar topography and is built on artificial fill material. The Piti Power Plant TSA and the surrounding power plant complex are very close to Apra Harbor. Topography of this area slopes towards the harbor, which is west of the site. Surface-water drainage patterns of the site and surrounding areas are approximations (Reference 5).

The climatology of the site and of the entire island of Guam is relatively constant with temperatures between approximately 80°F during the day and 70° at night. Mean annual rainfall ranges between 80 and 110 inches per year. The majority of the rainfall occurs during the rainy season from July through November (Reference 5).

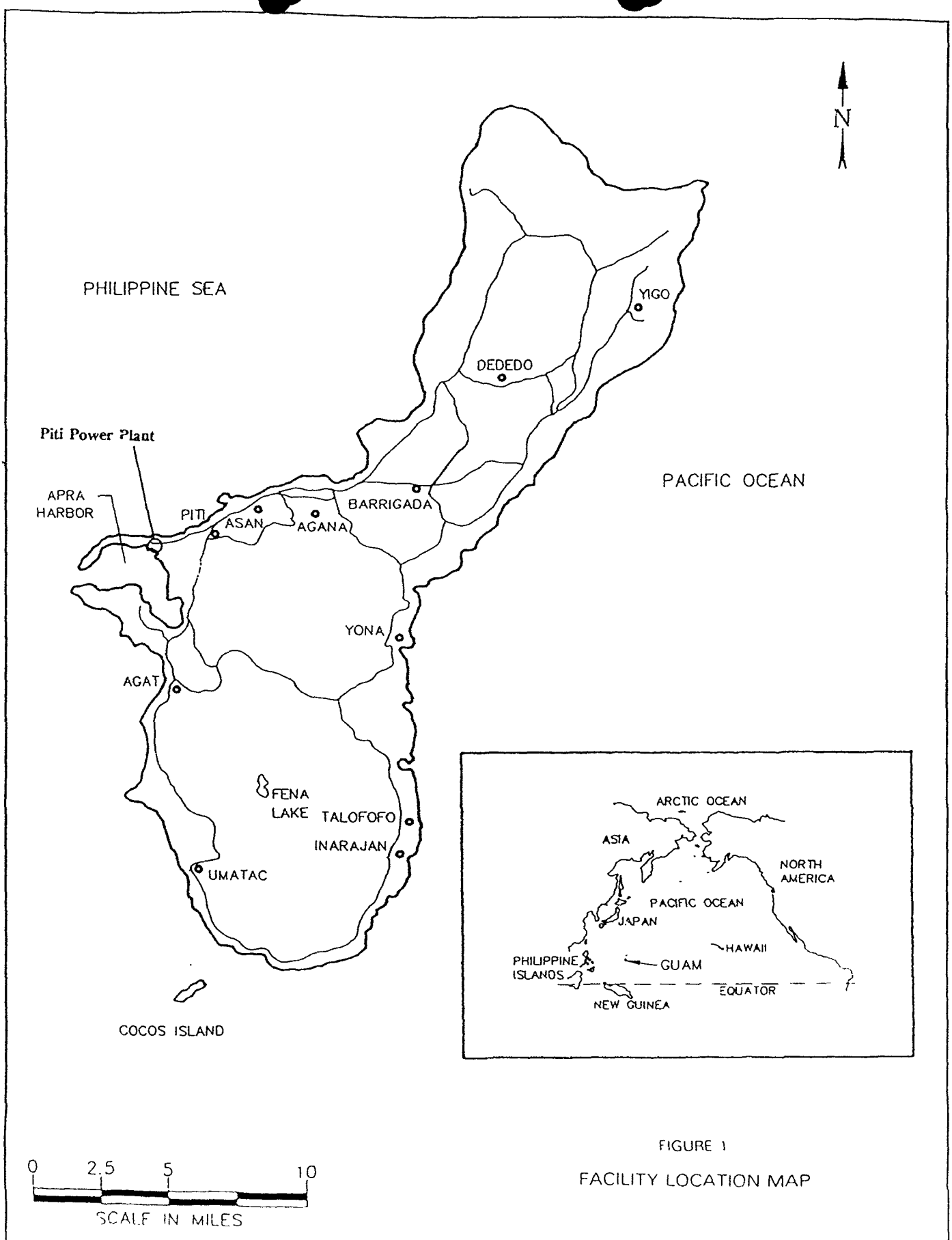

FIGURE 1

FACILITY LOCATION MAP

SOURCE: NEESA, 1983

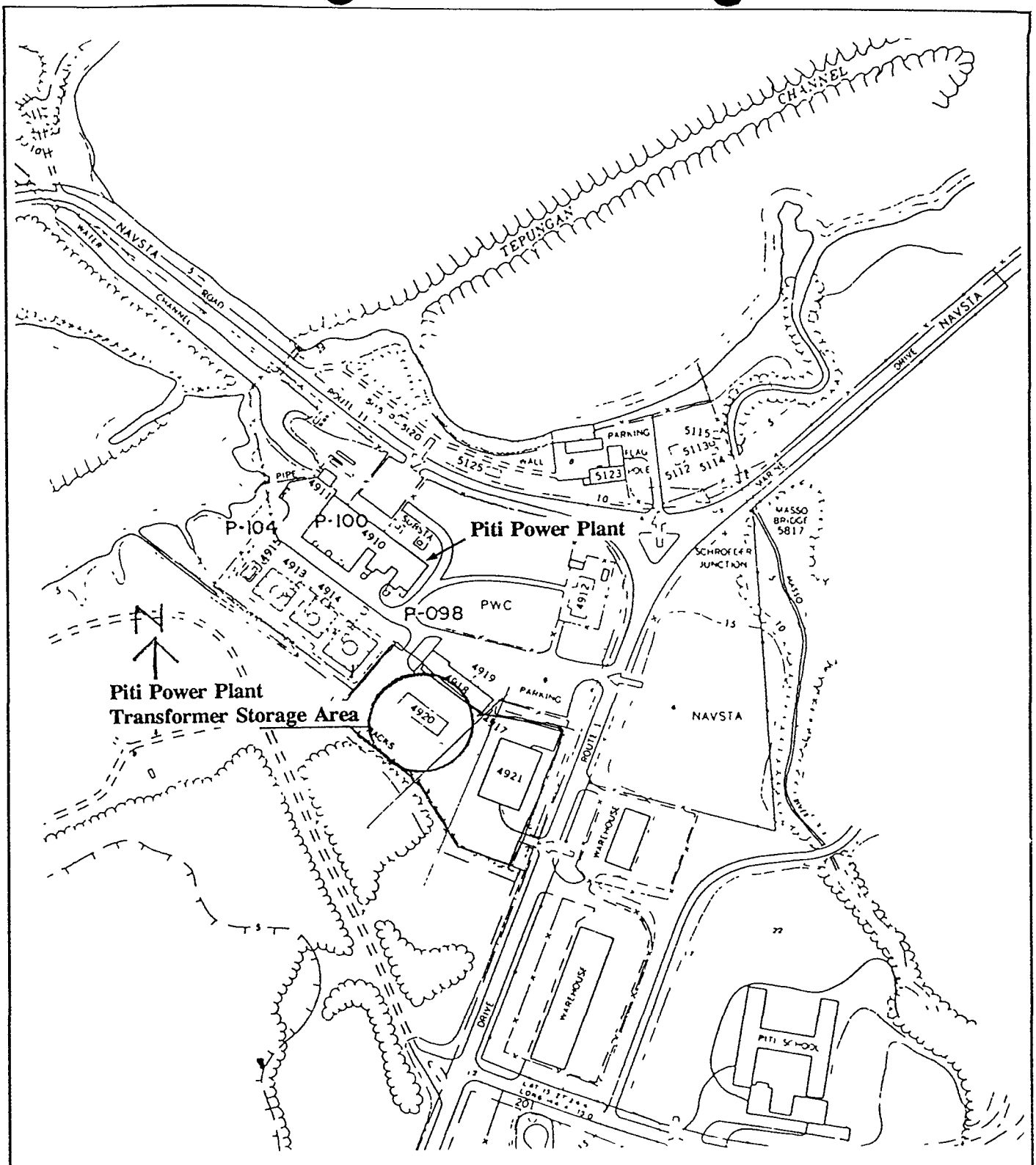

FIGURE 2

FACILITY LAYOUT MAP

Not to scale

SOURCE EPA SUPERFUND SITE FILE

2.3 OPERATIONAL HISTORY

The Piti Power Plant is an electrical power generating facility owned and operated by PWC Guam. The power plant was established in 1964 and currently operational. Prior to the existence of the power plant itself, PWC Guam used the Piti Power Plant TSA site, also owned and operated by PWC Guam, as an area for storage and maintenance of PCB-containing electrical equipment, presumably from other U. S. Navy (Navy) activities on Guam. After the power plant came into existence, the Piti Power Plant TSA continued to be used for the same purpose (References 1, 4).

According to EPA Form 8900-1, a release of PCBs was noted at the site sometime prior to 1981. Clean up of this area was conducted by PWC Guam and EPA in 1985 (Reference 2). The area was cleaned to a level of less than 2 ppm PCBs by disposing of contaminated concrete. How the cleanup was conducted and results of any confirmation sampling that may have occurred at the site could not be determined. The Piti Power Plant TSA is no longer used to store PCB containing electrical equipment but does remain as an open storage area for other items associated with electrical generating facilities. Out-of-service PCB electrical equipment is now turned over to the Defense Reutilization and Marketing Office on Guam for storage and eventual disposal (References 2, 4).

2.4 REGULATORY INVOLVEMENT

The Piti Power Plant TSA site was brought to EPA's attention on July 13, 1981 when an EPA Form 8900-1 was filed by the Commanding Officer of PWC Guam and was entered into the CERCLIS database on December 28, 1987. The PCB contamination that prompted the filing of EPA Form 8900-1 was cleaned up in 1985, and the cleanup operation was supervised by EPA and performed by PWC Guam (Reference 2). Cleanup records were not made available for this review. Due to the lack of information regarding the cleanup that may have been performed at this site, no conclusions can be made regarding the levels of PCBs that may remain at the site (Reference 2).

In 1987, a PCB transformer that was in use in the Piti Power Plant exploded and caught fire releasing PCBs and other PCB-combustion products (e.g., dioxins and furans). The interior of the power plant as well as some areas outside the plant were affected by this release. Cleanup operations continued through 1990, and the final cleanup report was accepted by both EPA and the Occupational

Safety and Health Administration (OSHA). It is unknown if the Piti Power Plant TSA site was affected by this release or if other cleanup actions at the site were undertaken as a result of the explosions at the power plant (References 6, 7).

3.0 INVESTIGATIVE EFFORTS

3.1 PREVIOUS SAMPLING

The cleanup operation at the Piti Power Plant TSA site was completed and sampling was required to determine PCB concentrations (Reference 2). Reports regarding this site cleanup were not available for review. It is not clear if confirmation sampling was conducted to verify removal of all PCB contamination.

3.2 CURRENT SAMPLING

No evidence of any ongoing or current sampling at the Piti Power Plant TSA was found.

4.0 HAZARD RANKING SYSTEM FACTORS

4.1 SOURCES OF CONTAMINATION

The only source of contamination associated with the Piti Power Plant TSA was a PCB release onto the concrete pad at the site, which occurred prior to 1981 (Reference 1, 2). This release was cleaned up to a residual PCB level of less than 2 ppm (Reference 2).

4.2 GROUNDWATER PATHWAY

4.2.1 Hydrogeologic Setting

Guam is comprised of two distinct sections: the northern and the southern sections. The northern section is described as limestone deposits. These limestone deposits are comprised of several varieties of limestone, of different ages, origins, and degrees of purity. The most dominate variety is

a massive, emerged-reef limestone consisting of coral, coralline algae, shells, calcite, and dolomite. These layers are commonly found loosely consolidated, but in some places, the limestone forms a very resistant and compact layer (Reference 5).

The southern section is composed of lava flows and associated dikes, that are overlain with explosive volcanic rock. The lava flows and associated dikes are chiefly composed of pillow lava that poured out from vents beneath the sea. Overlying the volcanic flows and pillow lavas are explosive, volcanic rocks that consist of fine-grained, hardened ash; ashy marine sediments; indurated ash with volcanic fragments; and material containing angular and subangular fragments of rock from several inches to several feet across (Reference 5).

The Piti Power Plant TSA is located on the western coast of Guam's southern section. It is built on artificial fill, beach deposits, and alluvium. The fill is composed of calcareous and volcanic clay, silt, sand, and cobble-sized particles in a heterogeneous mixture. The alluvium is composed primarily of clay deposits, but areas of muck and coarse-grained material do occur. The beach deposits are composed of unconsolidated calcareous sand and gravel with some consolidated beach rock in the intertidal zone (Reference 5).

The coastal lowlands include sand flats behind beaches in numerous embayments of the coast as well as marshes, swamps, and alluvial clay flats where streams empty into the ocean. The coastal lowland along Apra Harbor is a complex of alluvial fill, mud flats, mangrove swamps, sand flats, and sand beaches. Large waves associated with typhoons distribute sand landward for considerable distances and to heights 10 to 15 feet above datum (Reference 5).

4.2.2 Groundwater Targets

According to the 1974 geohydrology map of Guam, the nearest public drinking-water well is 5 miles east of the Piti Power Plant TSA. This well and others that exist further east of the site tap the Northern Guam Lens aquifer and are most likely between 400 and 500 feet deep. The Public Utility Authority of Guam blends water from approximately 100 wells, primarily tapping this aquifer, to supply the municipal drinking-water distribution system (References 8, 9).

The groundwater at the site is saline and is not acceptable as a fresh-water source. No evidence could be obtained regarding the existence of any private drinking-water or irrigation wells on Guam.

4.2.3 Groundwater Pathway Conclusion

There are no municipal drinking-water wells within 4 miles of the Piti Power Plant TSA. Groundwater beneath the site is brackish or saline and is unacceptable as a drinking water source. Rainwater, that has contacted the PCB-contaminated concrete, can infiltrate into the groundwater at the site by flowing off of the concrete pad into the surrounding soils.

4.3 SURFACE-WATER PATHWAY

4.3.1 Hydrologic Setting

The coastal lowlands on the west coast of Guam near the site include sand flats behind beaches in numerous embayments of the coast as well as marshes, swamps, and alluvial clay flats where streams empty into the ocean. The coastal lowland along Apra Harbor is a complex of alluvial fill, mud flats, mangrove swamps, sand flats, and sand beaches. Large waves associated with typhoons distribute sand landward for considerable distances and to heights 10 to 15 feet above datum (Reference 5).

The Piti Power Plant TSA is situated 800 feet east of Apra Harbor and 800 feet south of the Philippine Sea, the major surface-water bodies in the area. The Masso River lies 1,000 feet east of the site on the opposite side of Marine Drive, the major thoroughfare along the western side of Guam. This river enters the Philippine Sea approximately 1,500 feet further north of its closest point to the Piti Power Plant TSA. The Sasa River, another river in the area, is 0.75 miles south of the site and empties into Apra Harbor (Reference 3).

Rainfall throughout the entire island of Guam averages between 80 and 110 inches per year. Topography of the area is relatively flat but off-site flow of rainwater will flow towards Apra Harbor to the west. Specific drainage patterns at the site could not be determined (Reference 5).

According to EPA Form 8900-1, the site does not exist in a 100-year floodplain. Flood elevations in this area of Guam could not be determined during this review (Reference 1).

4.3.2 Surface-Water Targets

Surface water is not used for drinking water on Guam except that from the Navy's reservoir at Fena Lake. This lake, which is approximately 7 miles south of the Piti Power Plant TSA in the south central mountains of the island, is used by the Navy as a source of drinking water for many of its properties throughout Guam. This reservoir is not hydrologically associated with the site and is not a target associated with the site. The Navy also uses the municipally supplied drinking water as well (References 5, 9).

Apra Harbor and the Philippine Sea are designated as fisheries and are also used recreationally. Apra Harbor has a marina for recreational boating and the Philippine Sea supports other ocean activities, such as fishing, boating, diving, and commerce (Reference 5).

Along the western coast of Guam the only sensitive environments that contact Apra Harbor or the Philippine Sea are the wetland areas where many of the rivers in Guam enter the ocean. Due to the lack of rivers and streams on the northern portion of Guam, these wetlands only exist on the southern portion of the island. Five identified wetland areas are located on the western side of the island. These wetland areas, which are all south or southwest of the Piti Power Plant TSA site, are listed below along with their linear frontage along the Philippine Sea and their distance from the site (Reference 5).

Wetland Area	Linear Frontage	Distance South of the Site
Sasa Mangroves	0.5 miles	0.75 miles
Atantano Marshes	0.5 miles	2.0 miles
Naval Station Marshes	1.0 mile	3.5 miles
Namo River Flood Plain	0.5 miles	4.5 miles
Umatac Marsh	0.5 miles	11.0 miles

4.3.3 Surface-Water Pathway Conclusion

Due to the dense, relatively non-porous fill-soils used at the site, the majority of rainwater at the site will flow off the concrete pad towards Apra Harbor unless unknown localized drainage systems divert natural water flow to other surface-water bodies. No surface-water intakes for drinking-water supplies exist within 15 miles downstream of the site. Five wetland areas are known to exist on the southwestern shoreline of Guam that are within the 15-mile downstream target distance.

Due to the proximity of the site to the ocean, tsunami inundation is a possibility that could spread contamination off the site to a variety of other areas not normally associated with normal drainage patterns. The lack of information limited the evaluation of surface water pathways.

4.4 SOIL EXPOSURE AND AIR PATHWAY

4.4.1 Physical Conditions

The concrete pad at the Piti Power Plant TSA was the site of a release of PCBs. According to PWC Guam, the PCB contamination was cleaned up but no documentation of the cleanup effort was available. The site is now used as an outdoor area for storage of equipment associated with electrical power generation. The entire power plant complex is surrounded by a chain link fence to prevent unauthorized access.

Soil at the site is under the concrete pad and is not exposed. Soils under the pad at the site are believed to be fill material composed of fine-grained sand and clay. Migration of PCBs off site could not be determined.

Dominant winds on Guam are the trade winds which blow from the east or northeast. Trade winds are most constant and strongest during the dry season with wind speeds of 15 to 25 miles per hour. During the wet season, trade winds tend to die, and winds on the island become more variable. Storm systems and typhoons are more prevalent at this time of year and can bring extremely strong winds and torrential rains (Reference 5).

4.4.2 Soil and Air Targets

Workers are at the Piti Power Plant at all times because the plant is an electrical power generating facility. The number of workers at the plant could not be determined. The number of workers at the Piti Power Plant TSA, which is now an outdoor storage area, is also unknown.

According to the topographic map of Apra Harbor, Guam, the residence closest to the site is approximately 1,500 feet northeast of the site in the village of Piti. Piti School, the nearest school to the site, is 1,200 feet southeast of the site on the opposite side of Marine Drive. The residences and the school are located outside of the perimeter fence surrounding the power plant (Reference 3).

Based on 1990 Bureau of the Census data, the Piti area, where the Piti Power Plant TSA site exists, has a population of 1,104 persons (Reference 10). Within 4 miles of the site, approximately 4,800 people reside in mostly suburban and rural settings. PRC was unable to obtain any evidence of farming or livestock production in the area.

Guam is the habitat for endangered species of birds and mammals that have been listed on the Federal Endangered Species List (References 5, 11). They are as follows:

Common Name	Scientific Name
Birds	
Guam Broadbill	Hiagra freycineti
Marianas Crow	Corvus kubaryi
Micronesian Kingfisher	Halcyon c. cinnamonia
Guam Rail	Rallus owstoni
Marianas Common Moorhen	Gallinula chloropus quami
Marianas Fruit Dove	Ptilinopus roseicappillus
White-throated Ground Dove	Gallicolumba x. xanothura
Vanikoro Swiftlet	Aerodramus vanikorensis bartschi
Cardinal Honeyeater	Myzomela cardinalis saffordi
Bridled White-eye	Zosterops c. conspicillata

Mammals

Marianas Fruit Bat	Pteropus m. mariannus
Little Marianas Fruit Bat	Pteropus tokudae

The localized habitats for most of these terrestrial species are in remote locations in the interior mountains surrounding Fena Lake, at least 7 miles southwest of the site, or along the northern coastline of the island on Andersen Air Force Base property. The nearest habitat that harbors one of these federally listed endangered species is the Agana Swamp, which lies approximately 4.5 miles east of the site. This swamp is a critical habitat to the life-cycle of the Marianas Common Moorhen.

The other sensitive environments that exist in the area of the Piti Power Plant TSA site are the wetland areas noted in Section 4.3.2 of this report. These wetland areas are the Sasa Mangroves, the Atantano Marshes, the Namo River Flood Plain, the Naval Station Marshes, and the Umatac Marsh (References 3, 5).

4.4.3 Soil-Exposure and Air-Pathway Conclusions

Soils, mostly in the forms of dusts or dirt, that came into contact with the PCB contamination on the concrete pad are the soils of concern for exposure. Soils under the concrete pad, that may be contaminated, would not normally be exposed. Dermal exposure to contaminated concrete is possible via direct contact; however, the most probable route of exposure is via off-site spread of contaminated dusts and dirt on workers clothing or equipment. A fence exists around the entire power plant complex property, however, control over site access is not known.

Approximately 4,800 people reside within 4 miles of the Piti Power Plant TSA. The majority of these persons reside northeast of the site in the more populated Piti Village and Asan areas. Normal trade winds place these areas upwind of the site. Most of the property downwind of the site is located in and around the Apra Harbor area and is owned by the Navy.

The potential for soils from the site to come into contact with sensitive environments or habitats for endangered species is very remote. Normal trade winds, which blow out of the northeast,

do not direct any airborne dusts or vapors towards any endangered terrestrial animal habitats. No federally listed endangered species includes the Piti Power Plant TSA site as part of its habitat.

Four wetland areas exist within 4 miles of the site. These areas, the Sasa Mangroves, the Atantano marshes, the Naval Station Marshes, and the Namo River Food Plain are south or southwest of the site. Normal trade winds would place all these areas downwind of the site.

5.0 EMERGENCY RESPONSE CONSIDERATIONS

The National Contingency Plan [40 CFR 300.415(b) (2)] authorizes EPA to consider emergency response actions at those sites that pose an imminent threat to human health or the environment. Based on the available information, a referral to EPA's Region 9 Emergency Response Section does not appear to be necessary for the following reasons:

- The site was purportedly cleaned of PCB contamination by PWC Guam in 1985.
- No usable groundwater resources exist under the site.
- The general population is not at risk of direct exposure because the site is within a fenced area on PWC Guam property.
- No endangered species live on the site or include the site as part of their habitat.

6.0 CURRENT CONDITIONS OF THE SITE

The Piti Power Plant TSA is still an open storage area on the grounds of the Piti Power Plant complex. Outdoor storage of equipment associated with electrical power generation is ongoing. This operation continues because PWC Guam, the current operator of the site, states that the site has been cleaned up. However, PRC was unable to obtain the sampling report from the clean up to determine the effectiveness of the activities.

7.0 SUMMARY

The Piti Power Plant Transformer Storage Area (Piti Power Plant TSA) is an area on U.S. Naval Public Works Center Guam (PWC Guam) property that was used to store PCB transformers,

capacitors, and other PCB-electrical equipment. On site storage of PCB-containing electrical equipment was ongoing even before the Piti Power Plant became operational in 1964. In 1981, a release of PCBs onto the concrete pad at the Piti Power Plant TSA was reported by PWC Guam and, according to PWC Guam, was subsequently cleaned up in 1985. This cleanup, under the direction of the EPA, was completed by disposing of the PCB-contaminated concrete. Cleanup levels were set at 2 ppm PCBs. The extent of the spill and methods used to determine proper cleanup could not be determined. The site continues to be used as an outdoor storage area for electrical power generating equipment associated with the power plant.

The Piti Power Plant TSA is built on the western coast of Guam adjacent to the power plant. Soils under the site are assumed to be fill material primarily composed of fine sand and clay. No drinking-water wells exist at the site because no potable groundwater exists in the area. The nearest drinking-water well to the site is 5 miles upgradient of the site.

Direct exposure of PCBs to humans or animals is limited because the site is surrounded by a fence that encircles the entire power plant property. PWC Guam workers at the site could potentially be exposed on a regular basis if a contact hazard still exists. No endangered terrestrial species use the site as its habitat.

The pertinent Hazard Ranking System Factors for this site are as follows:

- No drinking-water wells exist within 4 miles of the site.
- Dense fill soils and the site's concrete pad limit the migration of contaminants to groundwater.
- The site is not within a 100-year flood zone.
- The Apra Harbor and the Philippine Sea are the dominant surface-water targets within 15 miles downstream of the site. These bodies of water are fisheries and recreational resources.
- No endangered species live on the site.
- Soil exposure is limited because the release occurred on the site's concrete pad and access to the Piti Power Plant complex is limited.

8.0 EPA RECOMMENDATION

	Initial	Date
Site Evaluation Accomplished (SEA)	cjl	10/9/92
Higher-Priority for Further Site Assessment	_____	_____
Lower Priority for Further Site Assessment	_____	_____
Defer to Other Authority (e.g., RCRA, TSCA)	_____	_____

Notes:

APPENDIX A

REFERENCE LIST

REFERENCE LIST

1. U.S. Navy Public Works Center, 1981, Notification of Hazardous Waste Site (EPA Form 8900-1) to U.S. Environmental Protection Agency, (July 13).

2. U.S. Naval Public Works Center, Guam, 1992, personal communication between Jess Lizama, PWC Environmental Officer, and Warren S. Hall, PRC Environmental Management, (July).

3. U.S. Geological Survey, 1968, "Apra Harbor, Guam" Quadrangle, 7.5 minute series (topographical), photorevised 1975.

4. Canto, James, 1992, personal communication with Mr. Warren S. Hall, PRC Environmental Management, Inc., (May 27).

5. Naval Energy and Environmental Support Activity, 1983, Initial Assessment Study of Guam Naval Complex, Volume III: Geology, Hydrology, and Biology of Guam. NEESA 13-027A, prepared for the Department of the Navy, Facilities Engineering Command, (December).

6. Guam Environmental Protection Agency, 1992, personal communication between Francis Damian, RCRA/CERCLA Group, and Megan J. Donahue, PRC Environmental Management, Inc., (July 6).

7. U.S. Naval Facilities Engineering Command, Pacific Ocean Division, 1992, personal communication between Layton Wong, Environmental Engineer, and Megan J. donahue, PRC Environmental Management, Inc., (July 9).

8. Geohydrology Map of Guam, 1974.

9. Guam Environmental Protection Agency, 1992, personal communication between Mary Lou Yamanaka, Water Resources Management Division, and Warren S. Hall, PRC Environmental Management, Inc., (May 27).

10. U.S. Department of commerce, Bureau of the Census, 1992, 1990 Census of Population and housing; Social, Economic, and Housing Characteristics Guam.

11. U.S. Department of the Interior, Fish and Wildlife Service, 1992, personal communication between William Kramer, Senior Staff Biologist, and Warren S. Hall, PRC Environmental Management, Inc., (July 6).

APPENDIX B

CONTACT LOG

CONTACT LOG

Facility Name: Piti Power Plant Transformer Storage Area
EPA ID No.: GU4170090001

Name	Affiliation	Telephone	Date	Regarding
James Canto Environ. Scientist	Unitek Environmental-Guam (Former Guam EPA employee)	(671) 565-3151	05/27/92	Site history with Guam EPA
Mary Lou Yamanaka	Guam EPA Water Resources Management Div.	(671) 646-9401	05/27/92	Municipal water supplies
Francis Damian	Guam EPA RCRA/CERCLA Group	(671) 646-9401	07/06/92	Historical information
William Kramer Sr. Staff Biologist	Fish and Wildlife Service	(808) 541-2749	07/06/92	Endangered species
Layton Wong Engineer	PACDIV Environmental Branch	(808) 474-5990	07/09/92	Historical information
Jess Lizama Environmental Officer	PWC Guam	(671) 339-4100	07/12/92	Historical information

APPENDIX C

CONTACT REPORTS

RECORD OF TELEPHONE CONVERSATION

Date 05 / 27 / 92 (Month/ Day /Year)

Project Number 672, 632, 621, 702, 642

Name Warren Hall

Initiated Call ☒ Returned Call ☐ Received Call ☐

Time 11.45 am ____ pm

Contact Jim Canto
Firm/Agency Unitek Environmental - Guam
Street formerly of GEPA
City ____ State ____
Zip ____
Phone 671 / 565 3151 Ext ____
Speed Call No. ____

SUBJECT HRS/PA Sites on Guam

CONVERSATION SUMMARY

I called Jim Canto to ask him questions regarding the various sites on Guam that I ~~was~~ am working the PA Score on. I mentioned the names of the sites and had him give me some basic information on what he remembers about each site.

Agana River & Paseo Site GU2 C0905563Z

This site is where rubble from the war devastated town of Agana was ~~#~~ bulldozed into. The site is now an open area that has a baseball stadium, public market, and parking area.

The COE may have info on this site because a UST was to be installed in the area in the early 1980's. When excavation was done, an oily substance was noted and COE did some study of the site GEPA may have

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File [ ] Proj Mgr [ ] Princ Inv [ ] Other [ ]

prc/fy

PRC ENVIRONMENTAL MANAGEMENT, INC. prc

2053

RECORD OF TELEPHONE CONVERSATION

Date 05 / 27 / 92 (Month/ Day /Year)

Project Number

Name Warren Hall

Initiated Call ☐ Returned Call ☐ Received Call ☐

Time _____ am _____ pm

Contact Jim Canto
Firm/Agency
Street
City State
Zip
Phone / Ext.
Speed Call No

SUBJECT:

CONVERSATION SUMMARY

~~more~~ more information regarding this site.

Naval Supply Dump 012 C09055672

Jim did not have much info on this site. The quarry has been abandoned and the area continues to have more commercial & residential development. He does not know of other studies done on this site.

Piti Power Plant 012 C09055702

Much study of this site has been done. As far as he knows, the transformer storage area is still used for the same purpose. PACDIV or PWC - Guam would have the best information on this site.

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File ☐ Proj Mgr ☐ Princ Inv ☐ Other ☐

Speedy

RECORD OF TELEPHONE CONVERSATION

Date 05 / 27 / 92 (Month/ Day /Year)

Project Number

Name Nimitz Hill

Initiated Call ☐ Returned Call ☐ Received Call ☐

Time _____ am _____ pm

Contact Jim Canto
Firm/Agency
Street
City State
Zip
Phone / Ext
Speed Call No

SUBJECT

CONVERSATION SUMMARY

Nimitz Hill Annex 012 c0 9055 642

Jim stated the COE would have info on this site to his knowledge. He also knows this site was covered by the IAS done by the Navy in 1983

Tenjo Vista Site - 012 C09055 621

Jim stated a few sites are ~~on this~~ in this area. The Navy has looked at this side.

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report [ ] Meeting ☐

cc File [ ] Proj Mgr [ ] Princ Inv [ ] Other [ ]

RECORD OF TELEPHONE CONVERSATION

Date 05 / 27 / 92 (Month/ Day /Year)

Project Number 672, 632, 621, 702, 642

Name Warren Hall

Initiated Call [X] Returned Call [ ] Received Call [ ]

Time _____ am 5 05 pm

Contact Mary Lou Yamanaka
Firm/Agency GEPA
Street
City State
Zip
Phone 671 / 646 9401 Ext
Speed Call No

SUBJECT General Info on Guam Municipal Water System

CONVERSATION SUMMARY

Mary Lou works with the Water Resources Management Division of Guam EPA. She states the majority of the municipal drinking water comes from wells that tap the Northern Guam lens. Well depths are normally 400 - 500 ft. deep in northern Guam. Some other wells are used in the central and southern part of Guam with average depths of 50 - 60 ft. Six separate sub basins are delineated on Guam.

The PUAG (Public Utility Authority of Guam) mixes waters from approx 100 different wells, depending on the supply, to feed the municipal supply distribution system. The Navy uses surface water from Fena Lake in addition to municipal water for its facilities.

REQUIRED RESPONSE

None [ ] Phone Call [ ] Memo [ ] Letter [ ] Report [ ] Meeting [ ]

cc File [ ] Proj Mgr [ ] Princ Inv [ ] Other [ ]

PRC ENVIRONMENTAL MANAGEMENT, INC. prc

RECORD OF TELEPHONE CONVERSATION

Date 07/06/92 (Month/ Day /Year)

Project Number

Name MEGAN DONAHUE

Initiated Call ☑ Returned Call ☐ Received Call ☐

Time ____ am 300 pm

Contact FRANCIS DAMIEN
Firm/Agency GUAM EPA
Street
City State
Zip
Phone 6711646 - 9401 Ext
Speed Call No.

SUBJECT: HISTORICAL INFORMATION FOR PITI POWER PLANT

CONVERSATION SUMMARY

PITI POWER PLANT

ACCORDING TO MR DAMIEN, BETWEEN 1987 - 1988 A PCB AND DIOXIN RELEASE OCCURED INSIDE AND POSSIBLY OUTSIDE THE PITI POWER PLANT THE AREA WAS CLEANED BY VERSAR AND IT CORPORATION. THERE ARE PEOPLE WORKING ON THE SITE TODAY

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File ☐ Proj Mgr ☐ Princ Inv ☐ Other ☐ _____ Specify

RECORD OF ~~TELEPHONE~~ CONVERSATION

Date 07 / 06 / 92 (Month/ Day /Year)

Project Number 012 C09055672, 632, 622, 702, 642

Name ~~Wilbur~~ Warren Hall

Initiated Call ☐ Returned Call ☐ Received Call ☐

Time _____ am 1:55 pm

Personal meeting

Contact William Kramer
Firm/Agency Fish + Wildlife Service
Street 300 Ala Moana Blvd. #6307
City Honolulu State HI
Zip
Phone 808 / 541 - 2749 Ext. _____
Speed Call No. _____

SUBJECT: Endangered Species of Animals on Guam

CONVERSATION SUMMARY

Met with William Kramer, Sr. Staff Biologist, of the Fish & Wildlife Service at his office to discuss some questions I had regarding endangered animal species habitats on Guam. He stated the only endangered ~~animal~~ terrestrial animal species that lives anywhere near the 5 Guam sites I described to him was the Marianas Common Moorhen (Marianas Gallinule) that used the Agana Swamp as its full life cycle habitat. The other endangered species of birds or bats on the federal list live either in the ~~south central~~ mountainous south central region of the island, mostly on Navy land near Fena Lake, or ~~at the northern extreme~~ the limestone forests along the very remote northern tip of the island on Anderson AFB land. These ~~Some~~ species found on Guam are also

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File ☐ Proj Mgr ☐ Princ Inv ☐ Other ☐ _____ Specify

PRC ENVIRONMENTAL MANAGEMENT, INC. prc

2 of 2

RECORD OF TELEPHONE CONVERSATION

Date 7 / 6 / 92 (Month/ Day /Year)

Project Number _____

Name Warren Hall

Initiated Call ☐ Returned Call ☐ Received Call ☐

Time _____ am _____ pm

Contact William Kramer
Firm/Agency _____
Street _____
City _____ State _____
Zip _____
Phone ( ) _____ Ext. _____
Speed Call No. _____

SUBJECT: _____

CONVERSATION SUMMARY

found on other Marianas islands such as Rota and Saipan.

He also stated that green sea turtles live in the ocean waters ~~of~~ surrounding Guam but do not nest on the western coastline of Guam. They may nest on more remote beaches of the northern part of this island. He is not an expert on marine species & he is not sure of this fact.

REQUIRED RESPONSE

None ☑ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File ☑ Proj Mgr ☐ Princ Inv ☐ Other ☐ _____ Specify

PRC ENVIRONMENTAL MANAGEMENT, INC. prc

RECORD OF TELEPHONE CONVERSATION

Date 07/09/92 (Month/ Day /Year)

Project Number

Name MEGAN DONAHUE

Initiated Call ☑ Returned Call ☐ Received Call ☐

Time ____ am 4:20 pm

Contact LAYTON WONG
Firm/Agency PACIFIC DIVISION - NAVY
Street
City State
Zip
Phone 1 474-5990 Ext.
Speed Call No.

SUBJECT: PITI POWER PLANT

CONVERSATION SUMMARY

THE PCB RELEASE OCCURED IN 1987. CLEAN UP CONTINUED UNTIL 1990. SINCE THE PLANT NEEDED TO BE IN OPERATION WORKERS CONTINUED TO RUN THE PLANT IN PPE. VERSAR WAS THE CONSULTANT ON SITE, IT STANTED CLEAN-UP AND RIEDEL FINSHED IT OFF. VERSAR SUBMITTED THE FINAL REPORT TO EPA AND OSHA STATING THAT THE CLEAN-UP WAS FINISHED. EPA AND OSHA BOTH CONCURRED ON THE CLEAN UP. THEY PROVIDED WRITTEN LETTERS THAT THE SITE WAS CLEAN

THE PCB TRANSFORMER CAUGHT ON FIRE, RELEASING DIOXINS SULPHURINS THROUGHOUT THE PLANT. THE TRANSFORMER WAS INSIDE.

REQUIRED RESPONSE

None ☐ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc: File ☐ Proj. Mgr ☐ Princ Inv ☐ Other ☐ (Specify)

PRC ENVIRONMENTAL MANAGEMENT, INC. prc

RECORD OF TELEPHONE CONVERSATION

Date 07 / 12 / 92 (Month/ Day /Year)

Project Number 012 C09055702

Name Warren Hall

Initiated Call ☑ Returned Call ☐ Received Call ☐

Time _____ am 3:40 (pm)

Contact Jess Lizama
Firm/Agency PWC - Guam
Street
City State
Zip
Phone 671 / 339 - 4100 Ext
Speed Call No.

SUBJECT. Piti Power Plant.

CONVERSATION SUMMARY

I asked Jess Lizama about the PCB transformer & Capacitor storage area at Piti Power Plant. He state a concrete pad outside of the power plant used to be used for storage of these items. PCB transformers, capacitors, and drums of transformer oils containing PCBs were stored there. Storage was outdoors on the pad; no structure over it.

He remembered evidence of a leak or spill was found about 10 years ago & PWC cleaned the pad in 1985. Cleanup was done under EPA supervision. Cleanup of the pad was to less than 2 ppm PCBs. The area is not no longer used for PCB transformer storage. All PCB equipment is turned over to DRMO for storage & eventual disposal.

REQUIRED RESPONSE

None ☑ Phone Call ☐ Memo ☐ Letter ☐ Report ☐ Meeting ☐

cc File ☑ Proj Mgr ☐ Princ Inv ☐ Other ☐ _____ Specify

APPENDIX D

TOPOGRAPHIC MAPS

PARTIALLY SCANNED
OVERSIZE ITEM(S)

See Document # **2051145**
for partially scanned image(s).

For complete version of oversize document(s),
see paper copy.